

09/ 943,037

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* * * * * * * * * * * * * Welcome to STN International * * * * * * * * * * *

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NEWS 2 "Ask CAS" for self-help around the clock
NEWS 3 SEP 09 CA/CAplus records now contain indexing from 1907 to the present
NEWS 4 DEC 08 INPADOC: Legal Status data reloaded
NEWS 5 SEP 29 DISSABS now available on STN
NEWS 6 OCT 10 PCTFULL: Two new display fields added
NEWS 7 OCT 21 BIOSIS file reloaded and enhanced
NEWS 8 OCT 28 BIOSIS file segment of TOXCENTER reloaded and enhanced
NEWS 9 NOV 24 MSDS-CCOHS file reloaded
NEWS 10 DEC 08 CABA reloaded with left truncation
NEWS 11 DEC 08 IMS file names changed
NEWS 12 DEC 09 Experimental property data collected by CAS now available in REGISTRY
NEWS 13 DEC 09 STN Entry Date available for display in REGISTRY and CA/CAplus
NEWS 14 DEC 17 DGENE: Two new display fields added
NEWS 15 DEC 18 BIOTECHNO no longer updated
NEWS 16 DEC 19 CROPU no longer updated; subscriber discount no longer available
NEWS 17 DEC 22 Additional INPI reactions and pre-1907 documents added to CAS databases
NEWS 18 DEC 22 IFIPAT/IFIUDB/IFICDB reloaded with new data and search fields
NEWS 19 DEC 22 ABI-INFORM now available on STN
NEWS 20 JAN 27 Source of Registration (SR) information in REGISTRY updated and searchable
NEWS 21 JAN 27 A new search aid, the Company Name Thesaurus, available in CA/CAplus
NEWS 22 FEB 05 German (DE) application and patent publication number format changes
NEWS 23 MAR 03 MEDLINE and LMEDLINE reloaded
NEWS 24 MAR 03 MEDLINE file segment of TOXCENTER reloaded
NEWS 25 MAR 03 FRANCEPAT now available on STN

NEWS EXPRESS MARCH 5 CURRENT WINDOWS VERSION IS V7.00A, CURRENT MACINTOSH VERSION IS V6.0b(ENG) AND V6.0Jb(JP), AND CURRENT DISCOVER FILE IS DATED 3 MARCH 2004
NEWS HOURS STN Operating Hours Plus Help Desk Availability
NEWS INTER General Internet Information
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NEWS WWW CAS World Wide Web Site (general information)

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09 / 943,037

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STRUCTURE FILE UPDATES: 10 MAR 2004 HIGHEST RN 661450-61-9
DICTIONARY FILE UPDATES: 10 MAR 2004 HIGHEST RN 661450-61-9

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 6, 2004

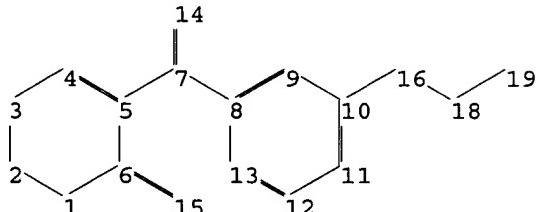
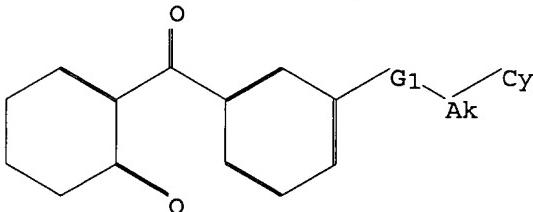
Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See **HELP CROSSOVER** for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:

<http://www.cas.org/ONLINE/DBSS/registryss.html>

```
=>  
Uploading C:\STNEXP4\QUERIES\09943037.str
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chain nodes :
7 14 15 16 18 19

ring nodes :

1 2 3 4

chain bonds :

5-7 6-15 7-8 7-14 10-16 16-18 18

ring bonds :

1-2 1-6 2-3 3-4 4-5 5-6 8

exact/norm bonds ...

6-15 7-14 10-16

exact bonds :

1-2 1-6 2-3

normalized bonds :

8-9 8-13 9-10 1

isolated ring systems :

containing 1 : 8 :

consulting - . . .

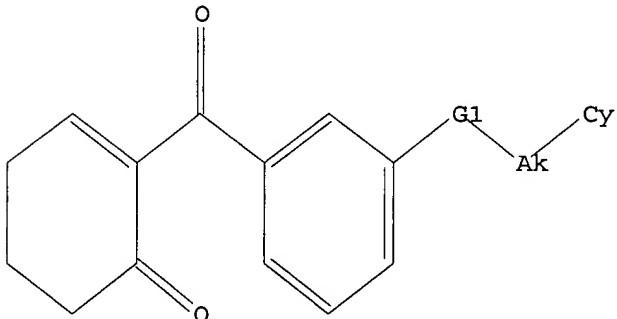
09/ 943,037

G1:O,S,N

Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:CLASS 8:Atom 9:Atom 10:Atom 11:Atom
12:Atom 13:Atom 14:CLASS 15:CLASS 16:CLASS 18:CLASS 19:Atom
Generic attributes :
18:
Number of Carbon Atoms : less than 7
19:
Number of Carbon Atoms : less than 7
Type of Ring System : Monocyclic

L1 STRUCTURE UPLOADED

=> d l1
L1 HAS NO ANSWERS
L1 STR



G1 O,S,N

Structure attributes must be viewed using STN Express query preparation.

=> s l1 ful
FULL SEARCH INITIATED 10:24:10 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 785 TO ITERATE

100.0% PROCESSED 785 ITERATIONS 90 ANSWERS
SEARCH TIME: 00.00.01

L2 90 SEA SSS FUL L1

=> file caplus
COST IN U.S. DOLLARS SINCE FILE TOTAL
FULL ESTIMATED COST ENTRY SESSION
155.42 155.63

FILE 'CAPLUS' ENTERED AT 10:24:16 ON 11 MAR 2004
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FILE COVERS 1907 - 11 Mar 2004 VOL 140 ISS 11
FILE LAST UPDATED: 10 Mar 2004 (20040310/ED)

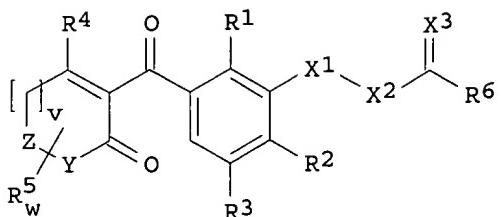
This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s 12
L3 7 L2

=> d 13 1- ibib abs hitstr
YOU HAVE REQUESTED DATA FROM 7 ANSWERS - CONTINUE? Y/ (N) :y

L3 ANSWER 1 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2003:818383 CAPLUS
DOCUMENT NUMBER: 139:323337
TITLE: Preparation of 2-(3-carbonylbenzoyl)- and
 2-(3-iminobenzoyl)cyclohexane-1,3-diones as herbicides
INVENTOR(S): Seitz, Thomas; Van Almsick, Andreas; Willms, Lothar;
 Schmitt, Monika H.; Auler, Thomas; Bieringer, Hermann;
 Menne, Hubert
PATENT ASSIGNEE(S): Bayer CropScience GmbH, Germany
SOURCE: PCT Int. Appl., 67 pp.
 CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|--|-------------------|------------------|------------|
| WO 2003084912 | A1 | 20031016 | WO 2003-EP3250 | 20030328 |
| W: | AE, AG, AL, AM, AU, AZ, BA, BB, BR, BY, BZ, CA, CN, CO, CR, CU,
DM, DZ, EC, GD, GE, HR, ID, IL, IN, IS, JP, KG, KP, KR, KZ, LC,
LK, LR, LT, LV, MA, MD, MG, MK, MN, MX, NI, NO, NZ, OM, PH, PL,
RU, SC, SG, TJ, TM, TN, TT, UA, US, UZ, VC, VN, YU, ZA, AM, AZ,
BY, KG, KZ, MD, RU, TJ, TM | | | |
| RW: | GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG,
CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC,
NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ,
GW, ML, MR, NE, SN, TD, TG | | | |
| DE 10215723 | A1 | 20031030 | DE 2002-10215723 | 20020410 |
| PRIORITY APPLN. INFO.: | | | DE 2002-10215723 | A 20020410 |
| OTHER SOURCE(S): | | MARPAT 139:323337 | | |
| GI | | | | |



I

AB Title compds. [I; X¹ = O, SOn, NH, NR⁶; X² = (branched) (substituted) alkylene, alkenylene, alkynylene; X³ = O, S, NOR⁷; R¹-R³ = H, mercapto, NO₂, halo, cyano, thiocyanato, (substituted) alkyl, cycloalkyl, etc.; R², R⁷ = H, (substituted) alkyl, alkenyl, alkynyl, cycloalkyl, etc.; R⁴ = OR⁸, (halo)alkylthio, (halo)alkenylthio, (halo)alkynylthio, (halo)alkylsulfonyl, etc.; R⁵ = H, (substituted) alkyl, cycloalkyl, tetrahydropyran-3-yl, etc.; R⁸ = H, (halo)alkyl, alkoxyalkyl, CHO, alkylcarbonyl, etc.; Y = O, S, NH, N-alkyl, CHR⁵, C(R⁵)₂; Z = bond, O, S, SO, SO₂, NH, N-alkyl, CHR⁹, C(R⁹)₂; R⁹ = H, halo, cyano, (halo)alkyl; v = 0-3; w = 0-4; n = 0-2], were prepared Thus, (3-oxo-1-cyclohexenyl)[2-chloro-3-(methylcarbonylmethoxy)-4-ethylsulfonyl]benzoate (preparation given) in MeCN followed by stirring with Me₂C(OH)CN and ET₃N for 3 h at room temperature to give 31% [2-chloro-3-(methylcarbonylmethoxy)-4-ethylsulfonylbenzoyl]cyclohexane-1,3-diones. The latter at 320 g/ha post-emergent gave 90-100% control of Chenopodium album, Echinochloa crus-galli, and Veronica persica. Several I at 80 and 320 g/ha gave 0% damage of wheat, rice, and corn.

IT 612846-15-8P 612846-24-9P 612846-25-0P

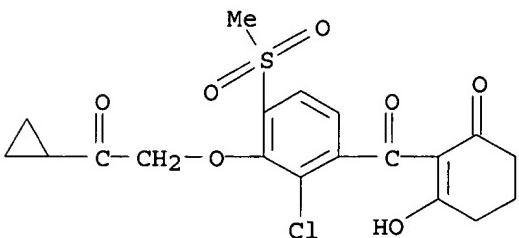
612846-26-1P

RL: AGR (Agricultural use); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of (carbonylbenzoyl)- and (iminobenzoyl)cyclohexanediones as herbicides)

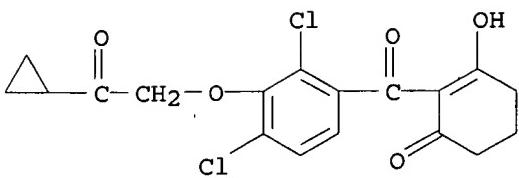
RN 612846-15-8 CAPLUS

CN 2-Cyclohexen-1-one, 2-[2-chloro-3-(2-cyclopropyl-2-oxoethoxy)-4-(methylsulfonyl)benzoyl]-3-hydroxy- (9CI) (CA INDEX NAME)

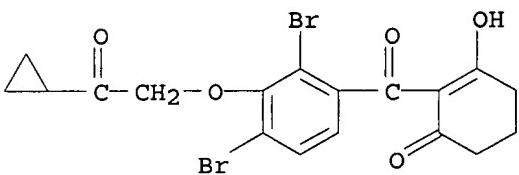


RN 612846-24-9 CAPLUS

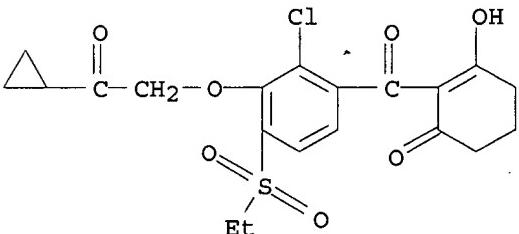
CN 2-Cyclohexen-1-one, 2-[2,4-dichloro-3-(2-cyclopropyl-2-oxoethoxy)benzoyl]-3-hydroxy- (9CI) (CA INDEX NAME)



RN 612846-25-0 CAPLUS
 CN 2-Cyclohexen-1-one, 2-[2,4-dibromo-3-(2-cyclopropyl-2-oxoethoxy)benzoyl]-3-hydroxy- (9CI) (CA INDEX NAME)



RN 612846-26-1 CAPLUS
 CN 2-Cyclohexen-1-one, 2-[2-chloro-3-(2-cyclopropyl-2-oxoethoxy)-4-(ethylsulfonyl)benzoyl]-3-hydroxy- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 2 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN
 ACCESSION NUMBER: 2003:633677 CAPLUS
 DOCUMENT NUMBER: 139:180066
 TITLE: Preparation of novel tetrazole derivatives as herbicides
 INVENTOR(S): Yanagi, Akihiko; Narabu, Shinichi; Yamaguchi, Yoshihiro; Goto, Toshio; Shirakura, Shinichi; Ueno, Chieko; Nakamura, Shin
 PATENT ASSIGNEE(S): Bayer CropScience AG, Germany
 SOURCE: PCT Int. Appl., 193 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---------------|---|----------|-----------------|----------|
| WO 2003066607 | A1 | 20030814 | WO 2003-EP772 | 20030127 |
| W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, | | | |

LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,
 PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ,
 UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD,
 RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG,
 CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC,
 NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW,
 ML, MR, NE, SN, TD, TG

JP 2003238540 A2 20030827 JP 2002-32551 20020208

PRIORITY APPLN. INFO.: JP 2002-32551 A 20020208

OTHER SOURCE(S): MARPAT 139:180066

GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

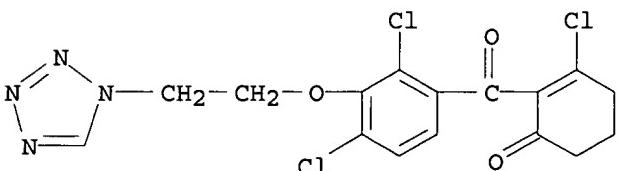
AB The title compds. [I; R₁ = halo, alkyl, haloalkyl, etc.; m = 0-3; n = 0-1; A = alkylene; T = II, III (wherein R₂ = H, alkyl, cycloalkyl, etc.); Q = IV-VI, CH(CN)COR₁₁ (R₃ = OH, halo, alkylcarbonyloxy, etc.; R₄-R₉ = H, alkyl; R₄ may, together with R₉, form an ethylene chain; R₁₀ = alkyl; R₁₁ = alkyl, cycloalkyl)], useful in agriculture, were prepared Thus, treating 3-oxo-1-cyclohexenyl 2,4-dichloro-3-[2-(1H-tetrazol-1-yl)ethoxy]benzoate with Et₃N and Me₂C(OH)CN in MeCN afforded VII which showed a herbicidal activity of 90% against Echinochloa crusgalli, Setaria viridis, Amaranthus retroflexus and Polygonum at 2.0 kg/ha.

IT 579452-60-1P

RL: AGR (Agricultural use); BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
 (preparation of novel tetrazole derivs. as herbicides)

RN 579452-60-1 CAPLUS

CN 2-Cyclohexen-1-one, 3-chloro-2-[2,4-dichloro-3-[2-(1H-tetrazol-1-yl)ethoxy]benzoyl]- (9CI) (CA INDEX NAME)



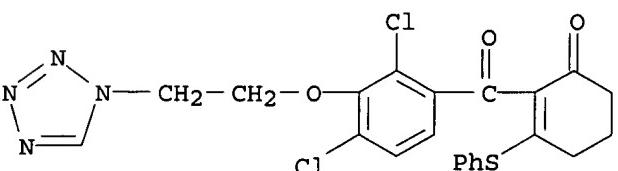
IT 579452-58-7P 579453-00-2P 579453-24-0P

579453-26-2P 579453-76-2P

RL: AGR (Agricultural use); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (preparation of novel tetrazole derivs. as herbicides)

RN 579452-58-7 CAPLUS

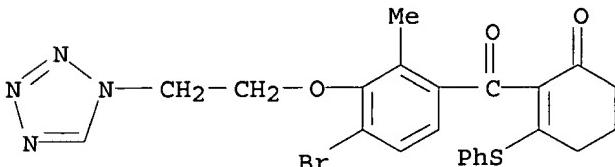
CN 2-Cyclohexen-1-one, 2-[2,4-dichloro-3-[2-(1H-tetrazol-1-yl)ethoxy]benzoyl]-3-(phenylthio)- (9CI) (CA INDEX NAME)



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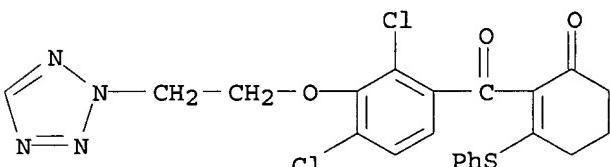
RN 579453-00-2 CAPLUS

CN 2-Cyclohexen-1-one, 2-[4-bromo-2-methyl-3-[2-(1H-tetrazol-1-yl)ethoxy]benzoyl]-3-(phenylthio)- (9CI) (CA INDEX NAME)



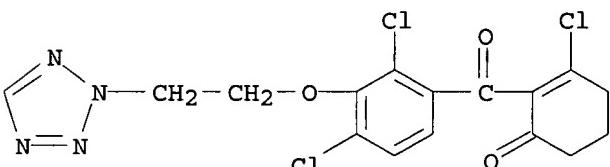
RN 579453-24-0 CAPLUS

CN 2-Cyclohexen-1-one, 2-[2,4-dichloro-3-[2-(2H-tetrazol-2-yl)ethoxy]benzoyl]-3-(phenylthio)- (9CI) (CA INDEX NAME)



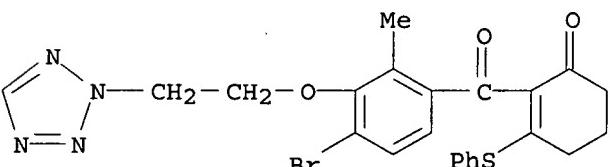
RN 579453-26-2 CAPLUS

CN 2-Cyclohexen-1-one, 3-chloro-2-[2,4-dichloro-3-[2-(2H-tetrazol-2-yl)ethoxy]benzoyl]- (9CI) (CA INDEX NAME)



RN 579453-76-2 CAPLUS

CN 2-Cyclohexen-1-one, 2-[4-bromo-2-methyl-3-[2-(2H-tetrazol-2-yl)ethoxy]benzoyl]-3-(phenylthio)- (9CI) (CA INDEX NAME)



REFERENCE COUNT:

3

THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 3 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2003:221655 CAPLUS

DOCUMENT NUMBER: 138:237899

TITLE: Preparation of (3-aminocarbonylbenzoyl)cyclohexanediones as herbicides

INVENTOR(S): Seitz, Thomas; Van Almsick, Andreas; Willms, Lothar; Auler, Thomas; Bieringer, Hermann; Menne, Hubert

PATENT ASSIGNEE(S) : Bayer CropScience GmbH, Germany
 SOURCE: PCT Int. Appl., 59 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent
 LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

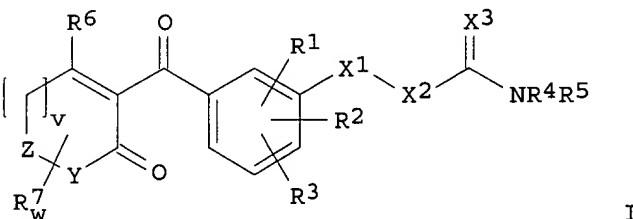
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|------------------|----------|
| WO 2003022810 | A1 | 20030320 | WO 2002-EP9876 | 20020904 |
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DM, DZ, EC, GD, GE, HR, HU, ID, IL, IN, IS, JP, KG, KP, KR, KZ,
LC, LK, LR, LT, LV, MA, MD, MG, MK, MN, MX, NO, NZ, OM, PH, PL,
RO, RU, SG, SI, TJ, TM, TN, TT, UA, US, UZ, VC, VN, YU, ZA, AM,
AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG,
CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL,
PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR,
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| DE 10144529 | A1 | 20030327 | DE 2001-10144529 | 20010911 |
| US 2003191027 | A1 | 20031009 | US 2002-238155 | 20020910 |

PRIORITY APPLN. INFO.: DE 2001-10144529 A 20010911

OTHER SOURCE(S) : MARPAT 138:237899

GI



AB Title compds. [I; X1 = O, S(O)nNH, NR4; X2 = (substituted) alkylene, alkenylene, alkynylene; X3 = O, S; R1-R3 = H, SH, NO2, halo, cyano, thiocyanato, alkylcarbonyloxy, etc.; R4, R5 = H, (cyclo)alkyl, (cyclo)alkenyl, (cyclo)alkynyl, alkylcycloalkyl, etc.; NR4R5 = 5-6 membered (saturated) (Ph-benzocondensed) (substituted) heterocyclyl; R6 = OR8, (halo)alkylthio, (halo)alkenylthio, (halo)alkynylthio, etc.; R7 = H, tetrahydro(thio)pyran-3-yl, tetrahydropyran-4-yl, alkyl, cycloalkyl, etc.; Y = O, S, NH, N-alkyl, CHR7, CR72; Z = O, S, SO, SO2, NH, N-alkyl, CHR9, CR92; R8 = H, (halo)alkyl, alkoxyalkyl, CHO, etc.; R9 = H, halo, cyano, NO2, (halo)alkyl, etc.; n = 0-2; v = 0-3; w = 0-4], were prepared. Thus, 2-chloro-3-(N,N-diethylaminocarbonylmethoxy)-4-ethylsulfonylbenzoic acid 3-oxo-1-cyclohexenyl ester (preparation given) in MeCN was dropwise treated with Me2C(OH)CN and Et3N followed by stirring for 2 h at room temperature and stirring with KCN for 10 h at room temperature to give 40% 2-[2-chloro-3-(N,N-diethylaminocarbonylmethoxy)-4-ethylsulfonylbenzoyl]cyclohexane-1,3-dione. I (R1 = 2-Cl; R2 = 4-Cl; R3 = H; Y, Z = CH2; v = 1; X3 = O; R6 = OH; X1X2 = OCH2; NR4R5 = NET2) at 90 g a.i./ha showed 90-95% postemergent control of Cyperus serotinus, Monochoria vaginalis, Sagittaria pygmaea and 0% damage of Oryza sativa.

IT 502149-33-9P 502149-34-0P 502149-70-4P
 502149-71-5P 502149-72-6P 502149-73-7P

502149-74-8P 502149-75-9P

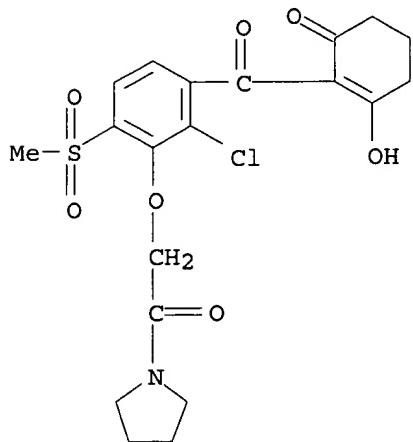
RL: AGR (Agricultural use); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)

09/ 943,037

(preparation of (aminocarbonylbenzoyl)cyclohexanediones as herbicides)

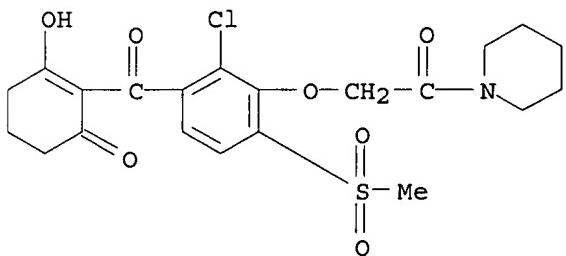
RN 502149-33-9 CAPLUS

CN Pyrrolidine, 1-[[2-chloro-3-[(2-hydroxy-6-oxo-1-cyclohexen-1-yl)carbonyl]-6-(methylsulfonyl)phenoxy]acetyl]- (9CI) (CA INDEX NAME)



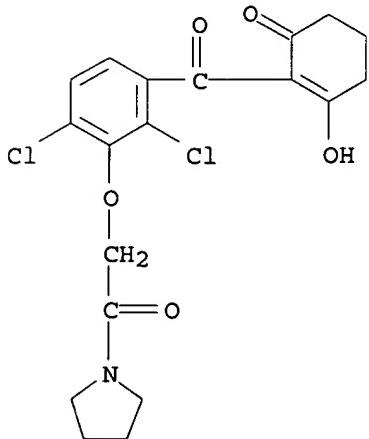
RN 502149-34-0 CAPLUS

CN Piperidine, 1-[[2-chloro-3-[(2-hydroxy-6-oxo-1-cyclohexen-1-yl)carbonyl]-6-(methylsulfonyl)phenoxy]acetyl]- (9CI) (CA INDEX NAME)



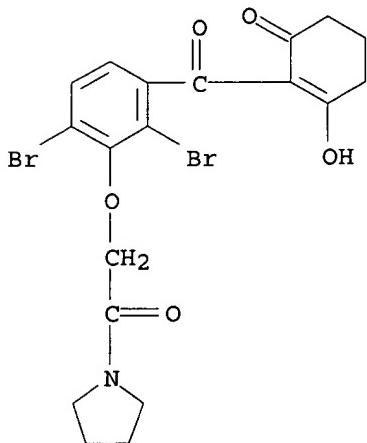
RN 502149-70-4 CAPLUS

CN Pyrrolidine, 1-[[2,6-dichloro-3-[(2-hydroxy-6-oxo-1-cyclohexen-1-yl)carbonyl]phenoxy]acetyl]- (9CI) (CA INDEX NAME)

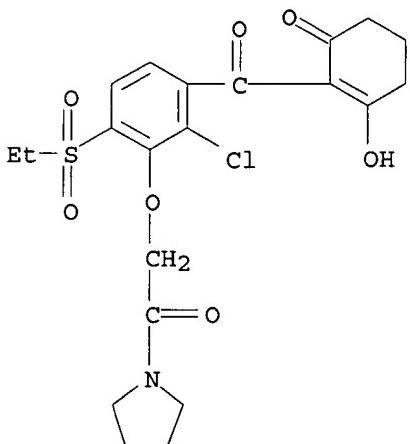


09/ 943,037

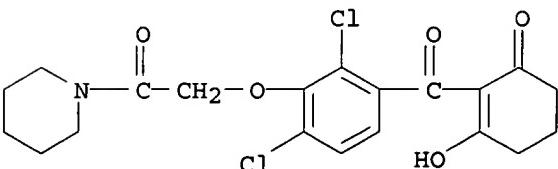
RN 502149-71-5 CAPLUS
CN Pyrrolidine, 1-[[2,6-dibromo-3-[(2-hydroxy-6-oxo-1-cyclohexen-1-yl)carbonyl]phenoxy]acetyl]- (9CI) (CA INDEX NAME)



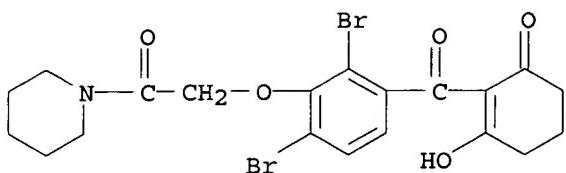
RN 502149-72-6 CAPLUS
CN Pyrrolidine, 1-[[2-chloro-6-(ethylsulfonyl)-3-[(2-hydroxy-6-oxo-1-cyclohexen-1-yl)carbonyl]phenoxy]acetyl]- (9CI) (CA INDEX NAME)



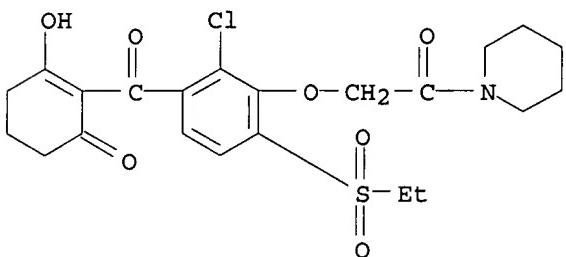
RN 502149-73-7 CAPLUS
CN Piperidine, 1-[[2,6-dichloro-3-[(2-hydroxy-6-oxo-1-cyclohexen-1-yl)carbonyl]phenoxy]acetyl]- (9CI) (CA INDEX NAME)



RN 502149-74-8 CAPLUS
CN Piperidine, 1-[[2,6-dibromo-3-[(2-hydroxy-6-oxo-1-cyclohexen-1-yl)carbonyl]phenoxy]acetyl]- (9CI) (CA INDEX NAME)



RN 502149-75-9 CAPLUS
 CN Piperidine, 1-[[2-chloro-6-(ethylsulfonyl)-3-[(2-hydroxy-6-oxo-1-cyclohexen-1-yl)carbonyl]phenoxy]acetyl]- (9CI) (CA INDEX NAME)



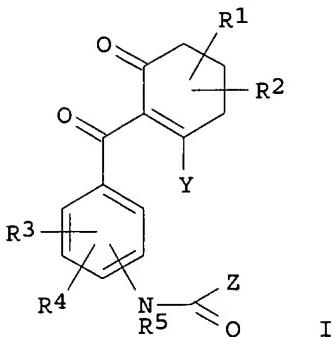
REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 4 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN
 ACCESSION NUMBER: 2002:888717 CAPLUS
 DOCUMENT NUMBER: 137:370089
 TITLE: Preparation of benzoylcyclohexenones as herbicides
 INVENTOR(S): Schwarz, Hans-Georg; Mueller, Klaus-Helmut; Hermann, Stefan; Hoischen, Dorothee; Kather, Kristian; Lehr, Stefan; Schallner, Otto; Drewes, Mark Wilhelm; Dahmen, Peter; Feucht, Dieter; Pontzen, Rolf
 PATENT ASSIGNEE(S): Bayer Aktiengesellschaft, Germany
 SOURCE: PCT Int. Appl., 141 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|--------------------|----------|
| WO 2002092574 | A1 | 20021121 | WO 2002-EP4851 | 20020503 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| DE 10138576 | A1 | 20021121 | DE 2001-10138576 | 20010806 |
| EP 1392660 | A1 | 20040303 | EP 2002-730231 | 20020503 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR | | | | |
| PRIORITY APPLN. INFO.: | | | DE 2001-10123887 A | 20010516 |
| | | | DE 2001-10138576 A | 20010806 |

OTHER SOURCE(S) :
GI

MARPAT 137:370089



AB Title compds. [I; Q = O, S; R1 = H, halo, (substituted) alkyl, alkylthio, aryl; R2 = H, halo, (substituted) alkyl; or R1R2 = O, alkylene; R3, R4 = H, NO₂, cyano, CO₂H, (thio)carbamoyl, halo, (substituted) alkyl, alkoxy, etc.; R5 = H, (substituted) alkyl, alkoxy, alkylthio, etc.; Y = OH, halo, (substituted) alkoxy, alkylthio, alkylsulfinyl, etc.; Z = H, amino, cyanoamino, nitroamino, hydroxyamino, hydrazino, (substituted) alkyl, alkylcarbonyl, alkoxy, alkoxy carbonyl, etc.], were prepared. Thus, a mixture of 2,4-dichloro-3-[3-methyl-2-oxo-1-imidazolidinyl]carbonylamino]benzoic acid (preparation given), cyclohexane-1,3-dione, dicyclohexylcarbodiimide (DCC), and MeCN was stirred for 18 h at 20° followed by filtering to give 49% N-[2,6-dichloro-3-(2,6-dioxocyclohexyl)carbonylphenyl]-3-methyl-2-oxo-1-imidazolidinecarboxamide. Several I were said to show strong pre- and postemergent herbicidal activity and good crop tolerance.

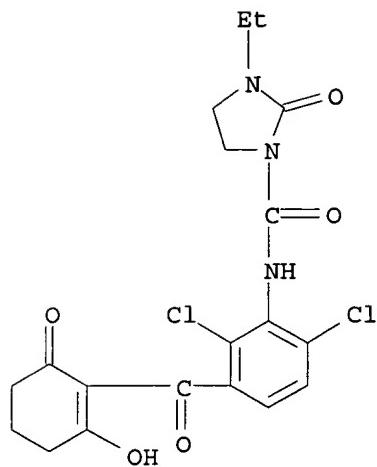
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 475555-75-0P 475555-77-2P 475555-78-3P
 475555-86-3P 475555-87-4P 475555-88-5P
 475555-94-3P 475555-96-5P 475556-02-6P
 475556-03-7P 475556-08-2P 475556-09-3P
 475556-10-6P 475556-11-7P 475556-17-3P
 475556-26-4P 475556-28-6P 475556-29-7P
 475556-31-1P 475556-32-2P 475556-34-4P
 475556-35-5P 475556-36-6P

RL: AGR (Agricultural use); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of benzoylcyclohexenones as herbicides)

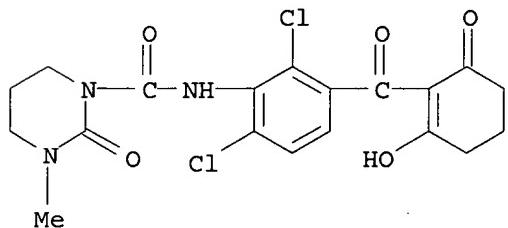
RN 475555-75-0 CAPLUS

CN 1-Imidazolidinecarboxamide, N-[2,6-dichloro-3-[(2-hydroxy-6-oxo-1-cyclohexen-1-yl)carbonyl]phenyl]-3-ethyl-2-oxo- (9CI) (CA INDEX NAME)



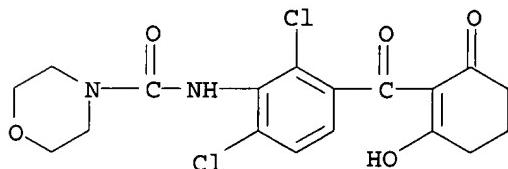
RN 47555-77-2 CAPLUS

CN 1(2H)-Pyrimidinecarboxamide, N-[2,6-dichloro-3-[(2-hydroxy-6-oxo-1-cyclohexen-1-yl)carbonyl]phenyl]tetrahydro-3-methyl-2-oxo- (9CI) (CA INDEX NAME)



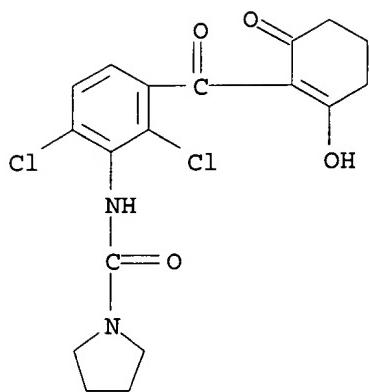
RN 47555-78-3 CAPLUS

CN 4-Morpholinecarboxamide, N-[2,6-dichloro-3-[(2-hydroxy-6-oxo-1-cyclohexen-1-yl)carbonyl]phenyl]- (9CI) (CA INDEX NAME)

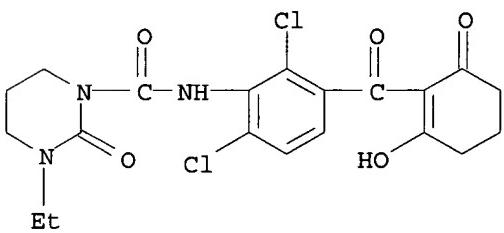


RN 47555-86-3 CAPLUS

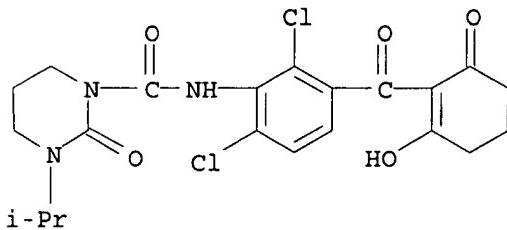
CN 1-Pyrrolidinecarboxamide, N-[2,6-dichloro-3-[(2-hydroxy-6-oxo-1-cyclohexen-1-yl)carbonyl]phenyl]- (9CI) (CA INDEX NAME)



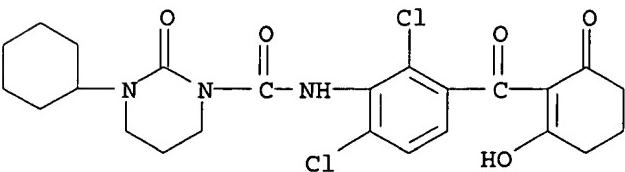
RN 475555-87-4 CAPLUS
CN 1(2H)-Pyrimidinecarboxamide, N-[2,6-dichloro-3-[(2-hydroxy-6-oxo-1-cyclohexen-1-yl)carbonyl]phenyl]-3-ethyltetrahydro-2-oxo- (9CI) (CA INDEX NAME)



RN 475555-88-5 CAPLUS
CN 1(2H)-Pyrimidinecarboxamide, N-[2,6-dichloro-3-[(2-hydroxy-6-oxo-1-cyclohexen-1-yl)carbonyl]phenyl]tetrahydro-3-(1-methylethyl)-2-oxo- (9CI) (CA INDEX NAME)



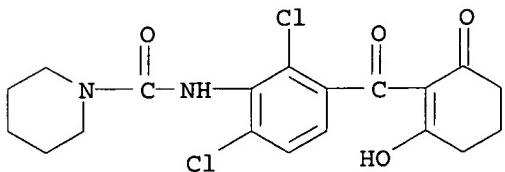
RN 475555-94-3 CAPLUS
CN 1(2H)-Pyrimidinecarboxamide, 3-cyclohexyl-N-[2,6-dichloro-3-[(2-hydroxy-6-oxo-1-cyclohexen-1-yl)carbonyl]phenyl]tetrahydro-2-oxo- (9CI) (CA INDEX NAME)



09/ 943,037

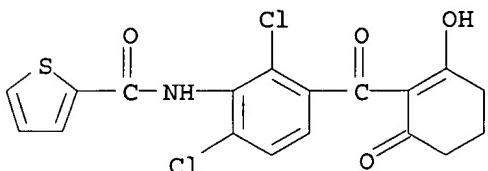
RN 475555-96-5 CAPLUS

CN 1-Piperidinecarboxamide, N-[2,6-dichloro-3-[(2-hydroxy-6-oxo-1-cyclohexen-1-yl)carbonyl]phenyl]- (9CI) (CA INDEX NAME)



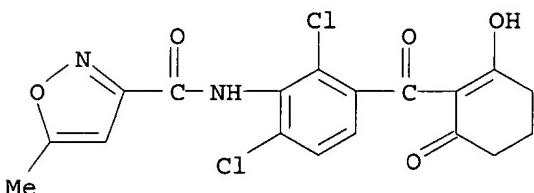
RN 475556-02-6 CAPLUS

CN 2-Thiophenecarboxamide, N-[2,6-dichloro-3-[(2-hydroxy-6-oxo-1-cyclohexen-1-yl)carbonyl]phenyl]- (9CI) (CA INDEX NAME)



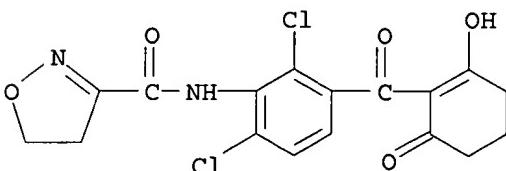
RN 475556-03-7 CAPLUS

CN 3-Isoazolecarboxamide, N-[2,6-dichloro-3-[(2-hydroxy-6-oxo-1-cyclohexen-1-yl)carbonyl]phenyl]-5-methyl- (9CI) (CA INDEX NAME)



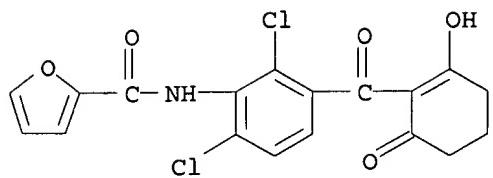
RN 475556-08-2 CAPLUS

CN 3-Isoazolecarboxamide, N-[2,6-dichloro-3-[(2-hydroxy-6-oxo-1-cyclohexen-1-yl)carbonyl]phenyl]-4,5-dihydro- (9CI) (CA INDEX NAME)



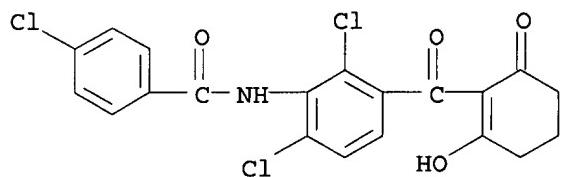
RN 475556-09-3 CAPLUS

CN 2-Furancarboxamide, N-[2,6-dichloro-3-[(2-hydroxy-6-oxo-1-cyclohexen-1-yl)carbonyl]phenyl]- (9CI) (CA INDEX NAME)



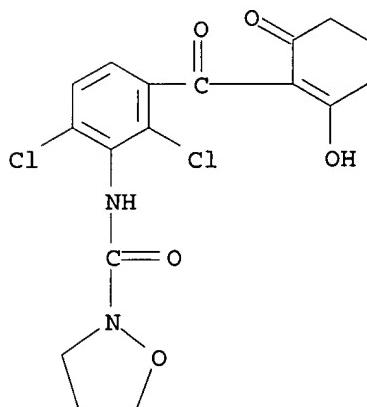
RN 475556-10-6 CAPLUS

CN Benzamide, 4-chloro-N-[2,6-dichloro-3-[(2-hydroxy-6-oxo-1-cyclohexen-1-yl)carbonyl]phenyl]- (9CI) (CA INDEX NAME)



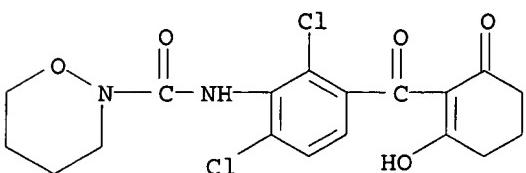
RN 475556-11-7 CAPLUS

CN 2-Isoxazolidinecarboxamide, N-[2,6-dichloro-3-[(2-hydroxy-6-oxo-1-cyclohexen-1-yl)carbonyl]phenyl]- (9CI) (CA INDEX NAME)



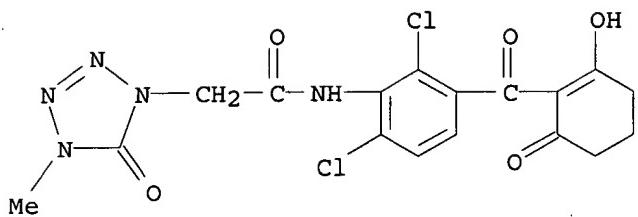
RN 475556-17-3 CAPLUS

CN 2H-1,2-Oxazine-2-carboxamide, N-[2,6-dichloro-3-[(2-hydroxy-6-oxo-1-cyclohexen-1-yl)carbonyl]phenyl]tetrahydro- (9CI) (CA INDEX NAME)

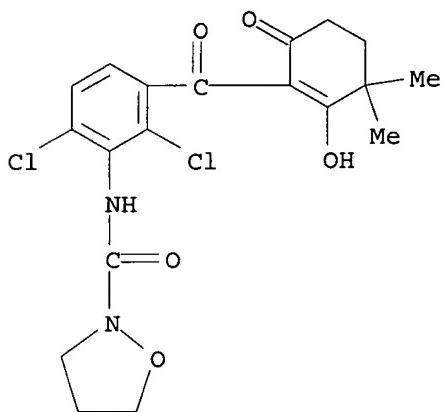


RN 475556-26-4 CAPLUS

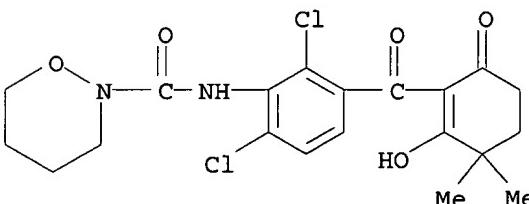
CN 1H-Tetrazole-1-acetamide, N-[2,6-dichloro-3-[(2-hydroxy-6-oxo-1-cyclohexen-1-yl)carbonyl]phenyl]-4,5-dihydro-4-methyl-5-oxo- (9CI) (CA INDEX NAME)



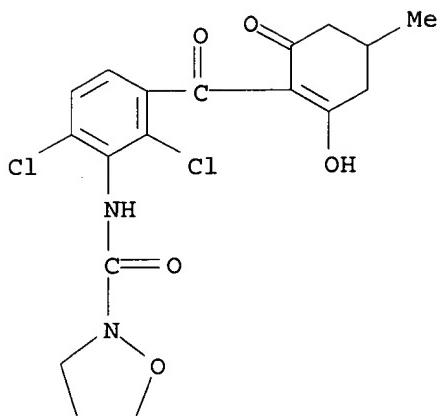
RN 475556-28-6 CAPLUS
CN 2-Isoxazolidinecarboxamide, N-[2,6-dichloro-3-[(2-hydroxy-3,3-dimethyl-6-oxo-1-cyclohexen-1-yl)carbonyl]phenyl]- (9CI) (CA INDEX NAME)



RN 475556-29-7 CAPLUS
CN 2H-1,2-Oxazine-2-carboxamide, N-[2,6-dichloro-3-[(2-hydroxy-3,3-dimethyl-6-oxo-1-cyclohexen-1-yl)carbonyl]phenyl]tetrahydro- (9CI) (CA INDEX NAME)

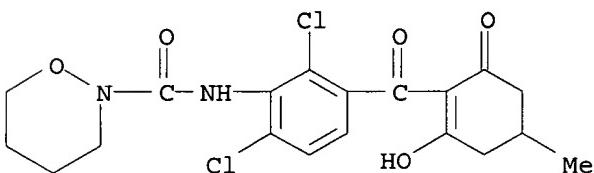


RN 475556-31-1 CAPLUS
CN 2-Isoxazolidinecarboxamide, N-[2,6-dichloro-3-[(2-hydroxy-4-methyl-6-oxo-1-cyclohexen-1-yl)carbonyl]phenyl]- (9CI) (CA INDEX NAME)



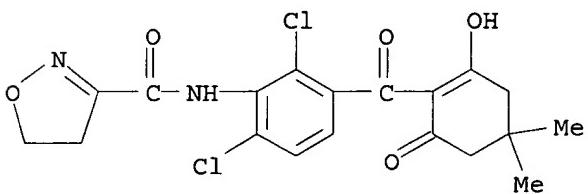
RN 475556-32-2 CAPLUS

CN 2H-1,2-Oxazine-2-carboxamide, N-[2,6-dichloro-3-[(2-hydroxy-4-methyl-6-oxo-1-cyclohexen-1-yl)carbonyl]phenyl]tetrahydro- (9CI) (CA INDEX NAME)



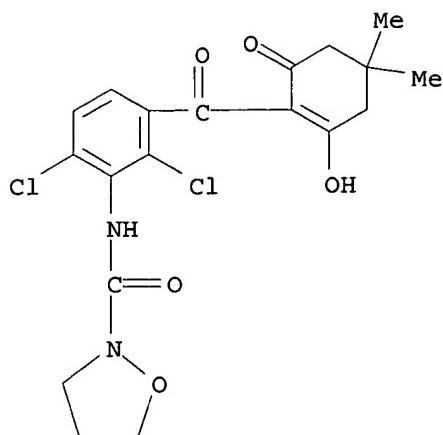
RN 475556-34-4 CAPLUS

CN 3-Isoxazolecarboxamide, N-[2,6-dichloro-3-[(2-hydroxy-4,4-dimethyl-6-oxo-1-cyclohexen-1-yl)carbonyl]phenyl]-4,5-dihydro- (9CI) (CA INDEX NAME)

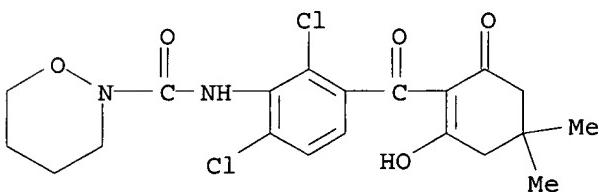


RN 475556-35-5 CAPLUS

CN 2-Isoxazolidinecarboxamide, N-[2,6-dichloro-3-[(2-hydroxy-4,4-dimethyl-6-oxo-1-cyclohexen-1-yl)carbonyl]phenyl]- (9CI) (CA INDEX NAME)



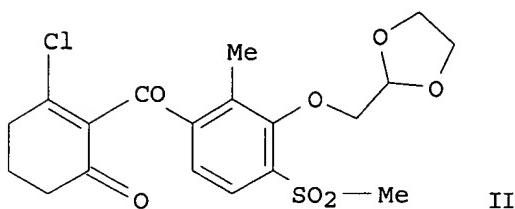
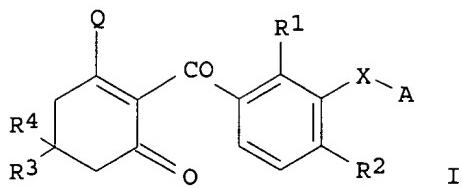
RN 475556-36-6 CAPLUS
 CN 2H-1,2-Oxazine-2-carboxamide, N-[2,6-dichloro-3-[(2-hydroxy-4,4-dimethyl-6-oxo-1-cyclohexen-1-yl)carbonyl]phenyl]tetrahydro- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 5 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN
 ACCESSION NUMBER: 2001:874399 CAPLUS
 DOCUMENT NUMBER: 136:5744
 TITLE: Preparation method of cyclohexenones and use as herbicides
 INVENTOR(S): Nakamura, Yuji; Palmer, Christopher John; Kikugawa, Hiroshi; Sano, Makiko; Ono, Ken
 PATENT ASSIGNEE(S): Ishihara Sangyo Kaisha, Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 43 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------------------------------------|----------|-----------------|----------|
| JP 2001335573 | A2 | 20011204 | JP 2000-154970 | 20000525 |
| PRIORITY APPLN. INFO.: | | | JP 2000-154970 | 20000525 |
| OTHER SOURCE(S): | CASREACT 136:5744; MARPAT 136:5744 | | | |
| GI | | | | |



AB Title compds. [I; X = alkylenyloxy, alkylenylthioxy; A = heterocyclyl; Q = halo, O(CH₂)_nR₅; R₁ = H, alkyl; R₂ = H, alkyl; R₃ = H, alkyl; R₄ = H, alkyl] and salts are prepared as the active component of herbicides. Thus, the title compound II was prepared and in vivo tested.

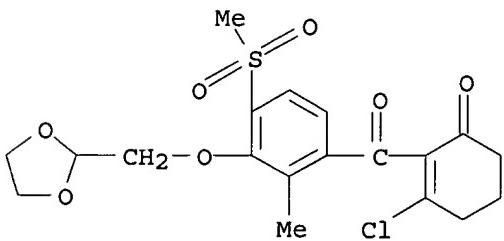
IT 376418-18-7P

RL: AGR (Agricultural use); BSU (Biological study, unclassified); BUU (Biological use, unclassified); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

(preparation method of cyclohexenones and use as herbicides)

RN 376418-18-7 CAPLUS

CN 2-Cyclohexen-1-one, 3-chloro-2-[3-(1,3-dioxolan-2-ylmethoxy)-2-methyl-4-(methylsulfonyl)benzoyl]- (9CI) (CA INDEX NAME)



IT 376418-31-4P 376418-38-1P 376418-48-3P
376418-56-3P 376418-64-3P 376418-72-3P
376418-80-3P 376418-87-0P 376418-94-9P
376419-01-1P 376419-10-2P 376419-17-9P
376419-23-7P 376419-31-7P 376419-39-5P

RL: AGR (Agricultural use); BSU (Biological study, unclassified); BUU (Biological use, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)

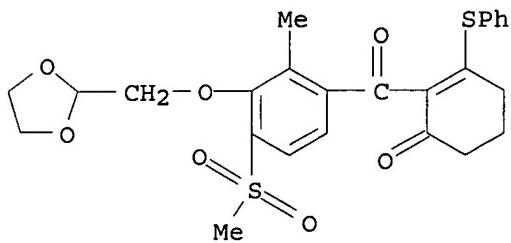
(preparation method of cyclohexenones and use as herbicides)

RN 376418-31-4 CAPLUS

CN 2-Cyclohexen-1-one, 2-[3-(1,3-dioxolan-2-ylmethoxy)-2-methyl-4-

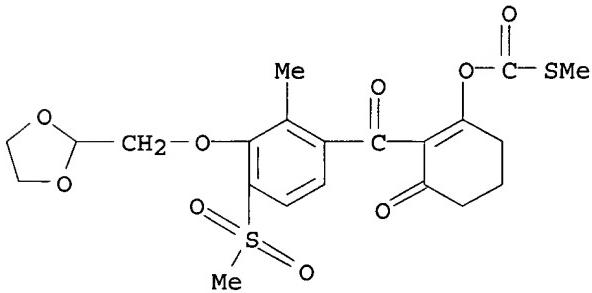
09/ 943,037

(methylsulfonyl)benzoyl]-3-(phenylthio)- (9CI) (CA INDEX NAME)



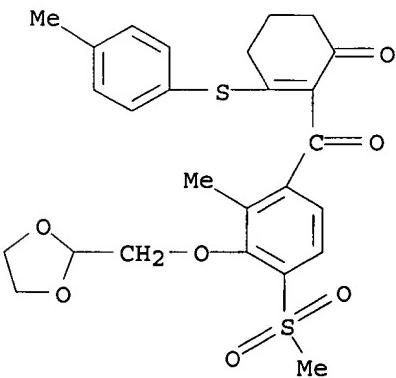
RN 376418-38-1 CAPLUS

CN Carbonothioic acid, O-[2-[3-(1,3-dioxolan-2-ylmethoxy)-2-methyl-4-(methylsulfonyl)benzoyl]-3-oxo-1-cyclohexen-1-yl] S-methyl ester (9CI)
(CA INDEX NAME)



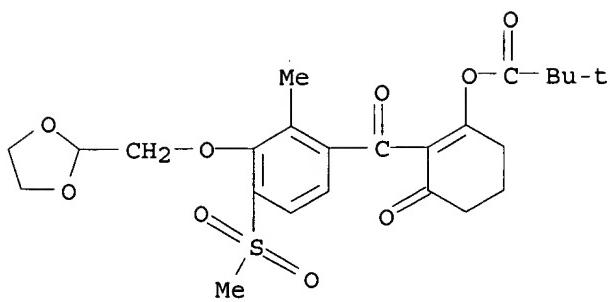
RN 376418-48-3 CAPLUS

CN 2-Cyclohexen-1-one, 2-[3-[(1,3-dioxolan-2-ylmethoxy)-2-methyl-4-(methylsulfonyl)benzoyl]-3-[(4-methylphenyl)thio]- (9CI) (CA INDEX NAME)



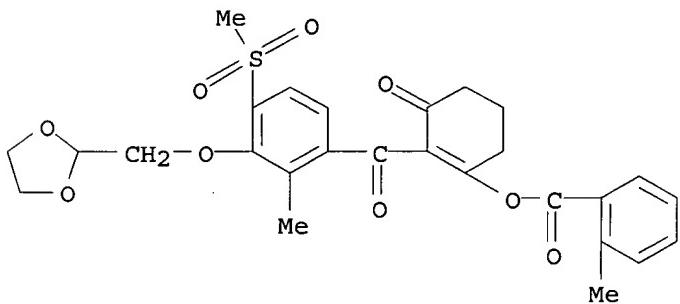
RN 376418-56-3 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 2-[3-[(1,3-dioxolan-2-ylmethoxy)-2-methyl-4-(methylsulfonyl)benzoyl]-3-oxo-1-cyclohexen-1-yl ester (9CI) (CA INDEX NAME)



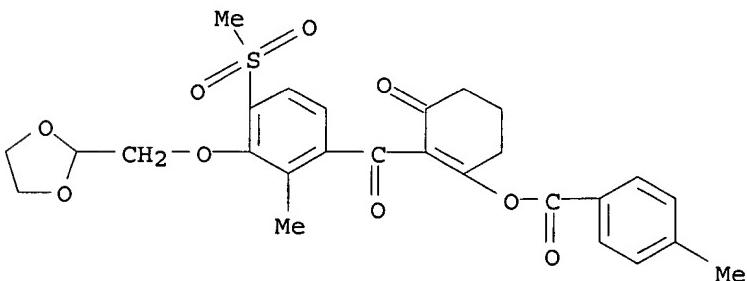
RN 376418-64-3 CAPLUS

CN Benzoic acid, 2-methyl-, 2-[3-(1,3-dioxolan-2-ylmethoxy)-2-methyl-4-(methylsulfonyl)benzoyl]-3-oxo-1-cyclohexen-1-yl ester (9CI) (CA INDEX NAME)



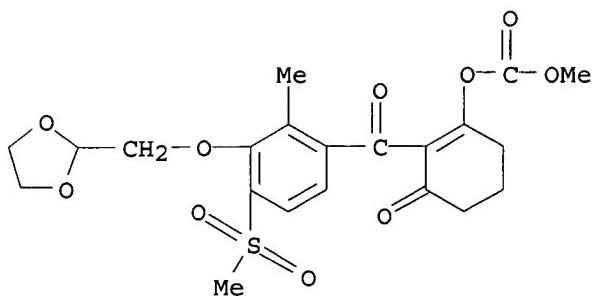
RN 376418-72-3 CAPLUS

CN Benzoic acid, 4-methyl-, 2-[3-(1,3-dioxolan-2-ylmethoxy)-2-methyl-4-(methylsulfonyl)benzoyl]-3-oxo-1-cyclohexen-1-yl ester (9CI) (CA INDEX NAME)

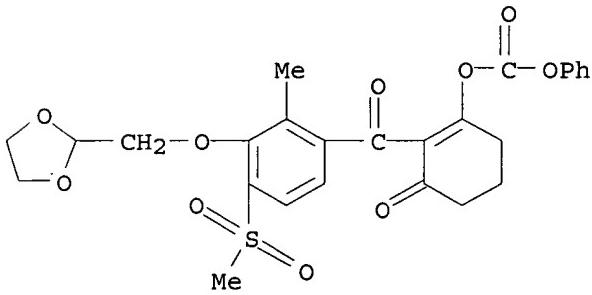


RN 376418-80-3 CAPLUS

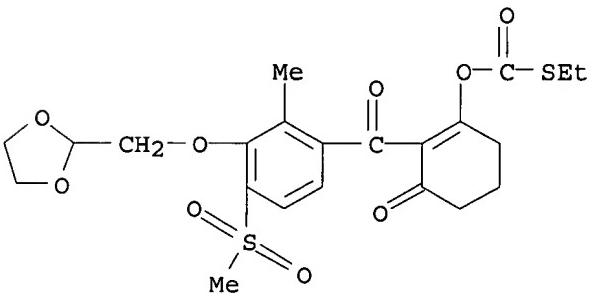
CN Carbonic acid, 2-[3-(1,3-dioxolan-2-ylmethoxy)-2-methyl-4-(methylsulfonyl)benzoyl]-3-oxo-1-cyclohexen-1-yl methyl ester (9CI) (CA INDEX NAME)



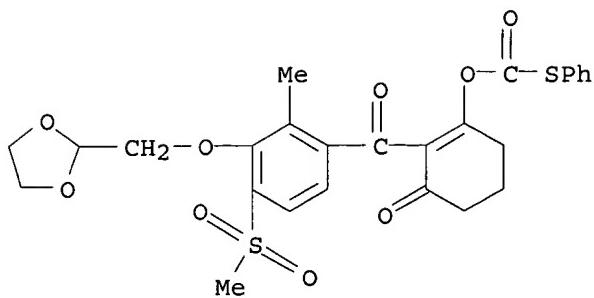
RN 376418-87-0 CAPLUS
CN Carbonic acid, 2-[3-(1,3-dioxolan-2-ylmethoxy)-2-methyl-4-(methylsulfonyl)benzoyl]-3-oxo-1-cyclohexen-1-yl phenyl ester (9CI) (CA INDEX NAME)



RN 376418-94-9 CAPLUS
CN Carbonothioic acid, O-[2-[3-(1,3-dioxolan-2-ylmethoxy)-2-methyl-4-(methylsulfonyl)benzoyl]-3-oxo-1-cyclohexen-1-yl] S-ethyl ester (9CI) (CA INDEX NAME)

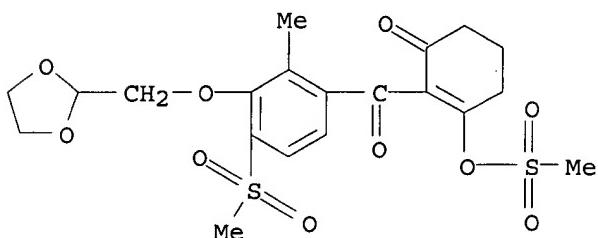


RN 376419-01-1 CAPLUS
CN Carbonothioic acid, O-[2-[3-(1,3-dioxolan-2-ylmethoxy)-2-methyl-4-(methylsulfonyl)benzoyl]-3-oxo-1-cyclohexen-1-yl] S-phenyl ester (9CI) (CA INDEX NAME)



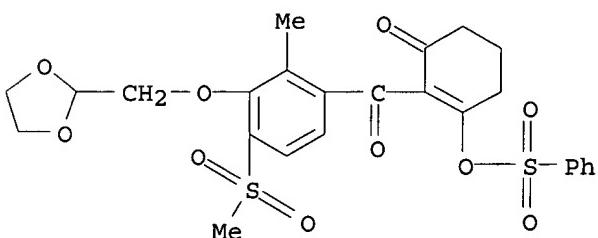
RN 376419-10-2 CAPLUS

CN 2-Cyclohexen-1-one, 2-[3-(1,3-dioxolan-2-ylmethoxy)-2-methyl-4-(methylsulfonyl)benzoyl]-3-[(methylsulfonyl)oxy]- (9CI) (CA INDEX NAME)



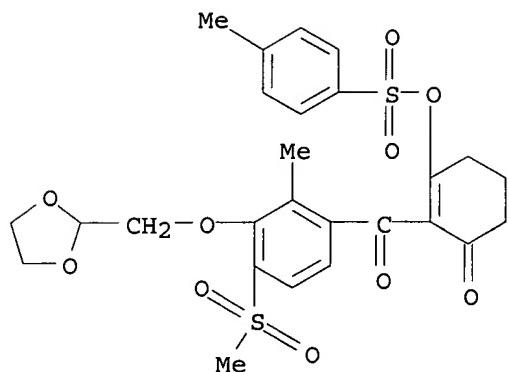
RN 376419-17-9 CAPLUS

CN 2-Cyclohexen-1-one, 2-[3-(1,3-dioxolan-2-ylmethoxy)-2-methyl-4-(methylsulfonyl)benzoyl]-3-[(phenylsulfonyl)oxy]- (9CI) (CA INDEX NAME)

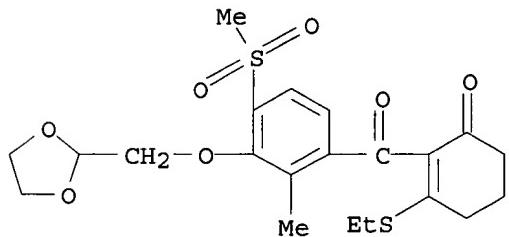


RN 376419-23-7 CAPLUS

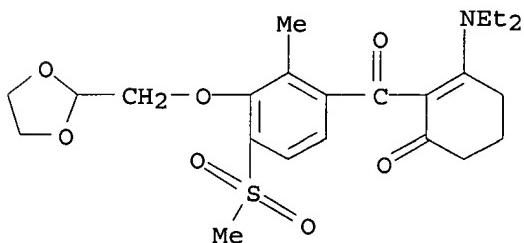
CN 2-Cyclohexen-1-one, 2-[3-(1,3-dioxolan-2-ylmethoxy)-2-methyl-4-(methylsulfonyl)benzoyl]-3-[[[4-methylphenyl]sulfonyl]oxy]- (9CI) (CA INDEX NAME)



RN 376419-31-7 CAPLUS
 CN 2-Cyclohexen-1-one, 2-[3-(1,3-dioxolan-2-ylmethoxy)-2-methyl-4-(methylsulfonyl)benzoyl]-3-(ethylthio)- (9CI) (CA INDEX NAME)



RN 376419-39-5 CAPLUS
 CN 2-Cyclohexen-1-one, 3-(diethylamino)-2-[3-(1,3-dioxolan-2-ylmethoxy)-2-methyl-4-(methylsulfonyl)benzoyl]- (9CI) (CA INDEX NAME)



L3 ANSWER 6 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN
 ACCESSION NUMBER: 2001:523547 CAPLUS
 DOCUMENT NUMBER: 135:92638
 TITLE: Preparation of 4-[3-[2-(1H-triazolin-1-yl)alkoxy]benzoyl]-1H-pyrazoles as herbicides
 INVENTOR(S): Schallner, Otto; Lehr, Stefan; Schwarz, Hans-Georg;
 Mueller, Klaus-Helmut; Hoischen, Dorothee; Drewes,
 Mark Wilhelm; Dahmen, Peter; Feucht, Dieter; Pontzen,
 Rolf; Yanagi, Akihiko; Narabu, Shinichi; Goto, Toshio
 PATENT ASSIGNEE(S): Bayer A.-G., Germany; Nihon Bayer Agrochem K.K.
 SOURCE: Ger. Offen., 54 pp.
 DOCUMENT TYPE: Patent
 LANGUAGE: German

09/ 943,037

FAMILY ACC. NUM. COUNT: 1

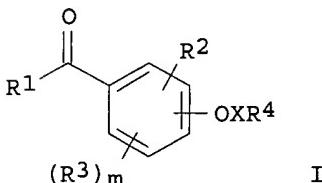
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|--|----------|---------------------|------------|
| DE 10039723 | A1 | 20010719 | DE 2000-10039723 | 20000814 |
| WO 2001053275 | A2 | 20010726 | WO 2001-EP92 | 20010105 |
| W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | |
| RW: | GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | |
| BR 2001007624 | A | 20021112 | BR 2001-7624 | 20010105 |
| EP 1324996 | A2 | 20030709 | EP 2001-903626 | 20010105 |
| R: | AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR | | | |
| JP 2004504266 | T2 | 20040212 | JP 2001-553277 | 20010105 |
| US 2003153465 | A1 | 20030814 | US 2002-181327 | 20020715 |
| PRIORITY APPLN. INFO.: | | | DE 2000-10001588 A1 | 20000117 |
| | | | DE 2000-10039723 A | 20000814 |
| | | | WO 2001-EP92 | W 20010105 |

OTHER SOURCE(S) :

MARPAT 135:92638

GI



AB Title compds. [I; R1 = (substituted) dioxocycloalkyl, oxazolyl, pyrazolyl, alkylcarbonyl; R2 = H, NO₂, cyano, CO₂H, carbamoyl, thiocarbamoyl, halo, (substituted) alkyl, alkoxy, alkylthio, etc.; R3 = NO₂, cyano, CO₂H, carbamoyl, thiocarbamoyl, halo, (substituted) alkyl, alkoxy, alkylthio, alkylsulfinyl, etc.; R4 = (substituted) mono- or bicyclic heterocyclyl; X = alkylene; n = 0-2] were prepared as herbicides (no data). Thus, 3-[2-(3,4-dimethyl-1,2,4-1H-triazolin-5-on-1-yl)ethoxy]-2-methyl-4-methylsulfonylbenzoyl chloride (analog preparation given) in CH₂Cl₂ was treated with 1-ethyl-5-hydroxypyrazole, Et₃N, and 1 drop of DMF followed by stirring for 24 h at 20° to give 88% 4-[3-[2-(3,4-dimethyl-1,2,4-1H-triazolin-5-on-1-yl)ethoxy]-2-methyl-4-methylsulfonylbenzoyl]-1-ethyl-5-hydroxy-1H-pyrazole. It was said to show very strong pre- and postemergent herbicidal activity and good crop tolerance.

IT
349478-83-7P 349478-85-9P 349478-87-1P
349478-89-3P 349478-90-6P 349478-92-8P
349479-01-2P 349479-04-5P 349479-06-7P
349479-07-8P 349479-09-0P 349479-11-4P
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349479-31-8P

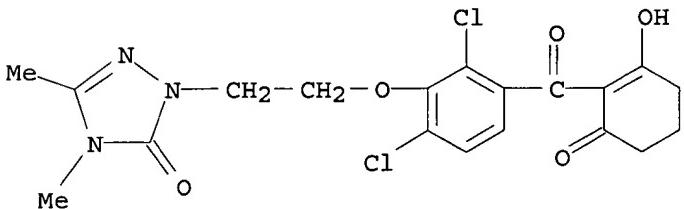
RL: AGR (Agricultural use); BAC (Biological activity or effector, except

09/ 943,037

adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses) (preparation of triazolinylalkoxybenzoylpyrazoles as herbicides)

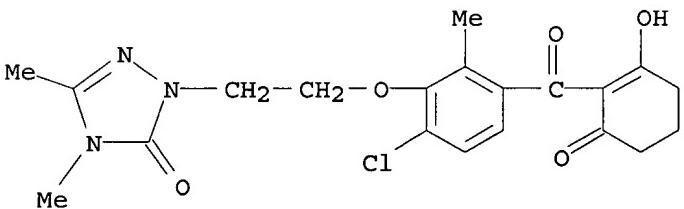
RN 349478-83-7 CAPLUS

CN 3H-1,2,4-Triazol-3-one, 2-[2-[2,6-dichloro-3-[(2-hydroxy-6-oxo-1-cyclohexen-1-yl)carbonyl]phenoxy]ethyl]-2,4-dihydro-4,5-dimethyl- (9CI) (CA INDEX NAME)



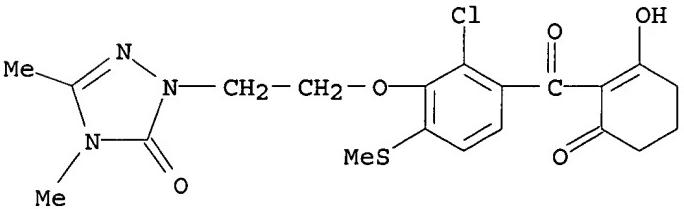
RN 349478-85-9 CAPLUS

CN 3H-1,2,4-Triazol-3-one, 2-[2-[6-chloro-3-[(2-hydroxy-6-oxo-1-cyclohexen-1-yl)carbonyl]-2-methylphenoxy]ethyl]-2,4-dihydro-4,5-dimethyl- (9CI) (CA INDEX NAME)



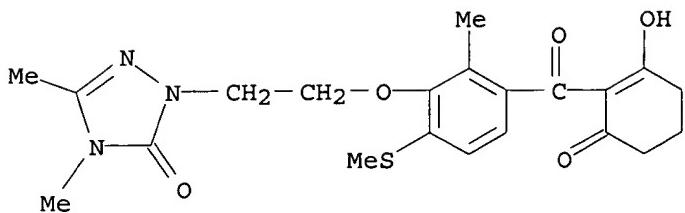
RN 349478-87-1 CAPLUS

CN 3H-1,2,4-Triazol-3-one, 2-[2-[2-chloro-3-[(2-hydroxy-6-oxo-1-cyclohexen-1-yl)carbonyl]-6-(methylthio)phenoxy]ethyl]-2,4-dihydro-4,5-dimethyl- (9CI) (CA INDEX NAME)

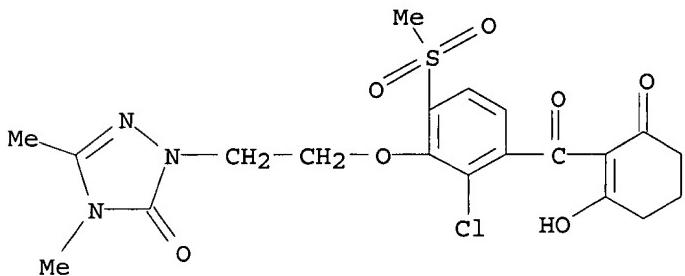


RN 349478-89-3 CAPLUS

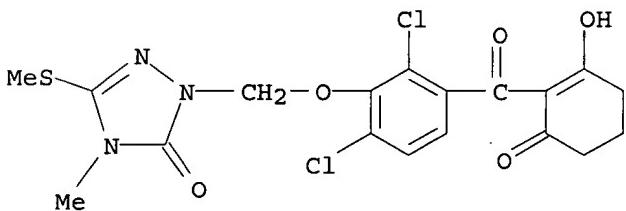
CN 3H-1,2,4-Triazol-3-one, 2,4-dihydro-2-[2-[3-[(2-hydroxy-6-oxo-1-cyclohexen-1-yl)carbonyl]-2-methyl-6-(methylthio)phenoxy]ethyl]-4,5-dimethyl- (9CI) (CA INDEX NAME)



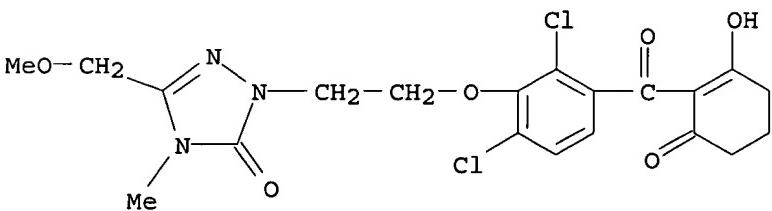
RN 349478-90-6 CAPLUS
CN 3H-1,2,4-Triazol-3-one, 2-[2-[2-chloro-3-[(2-hydroxy-6-oxo-1-cyclohexen-1-yl)carbonyl]-6-(methylsulfonyl)phenoxy]ethyl]-2,4-dihydro-4,5-dimethyl-(9CI) (CA INDEX NAME)



RN 349478-92-8 CAPLUS
CN 3H-1,2,4-Triazol-3-one, 2-[[2,6-dichloro-3-[(2-hydroxy-6-oxo-1-cyclohexen-1-yl)carbonyl]phenoxy]methyl]-2,4-dihydro-4-methyl-5-(methylthio)-(9CI) (CA INDEX NAME)



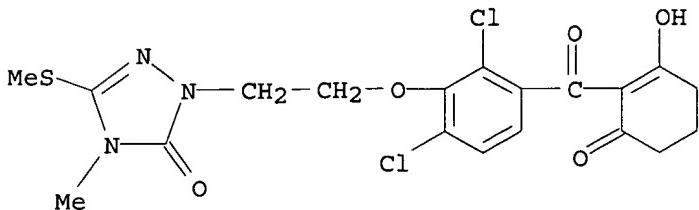
RN 349479-01-2 CAPLUS
CN 3H-1,2,4-Triazol-3-one, 2-[2-[2,6-dichloro-3-[(2-hydroxy-6-oxo-1-cyclohexen-1-yl)carbonyl]phenoxy]ethyl]-2,4-dihydro-5-(methoxymethyl)-4-methyl-(9CI) (CA INDEX NAME)



RN 349479-04-5 CAPLUS
CN 3H-1,2,4-Triazol-3-one, 2-[2-[2,6-dichloro-3-[(2-hydroxy-6-oxo-1-

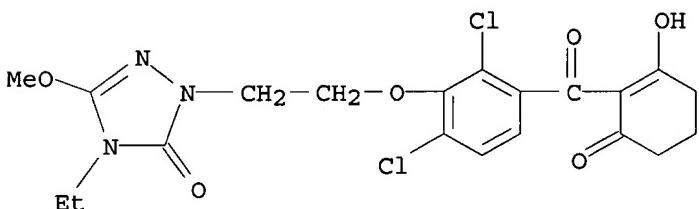
09/ 943,037

cyclohexen-1-yl)carbonyl]phenoxyethyl]-2,4-dihydro-4-methyl-5-(methylthio)- (9CI) (CA INDEX NAME)



RN 349479-06-7 CAPLUS

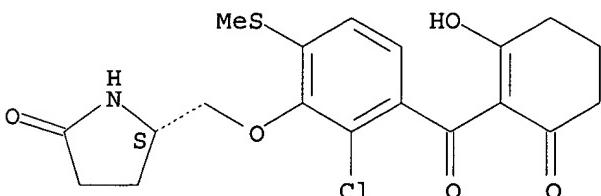
CN 3H-1,2,4-Triazol-3-one, 2-[2-[2,6-dichloro-3-[(2-hydroxy-6-oxo-1-cyclohexen-1-yl)carbonyl]phenoxyethyl]-4-ethyl-2,4-dihydro-5-methoxy- (9CI) (CA INDEX NAME)



RN 349479-07-8 CAPLUS

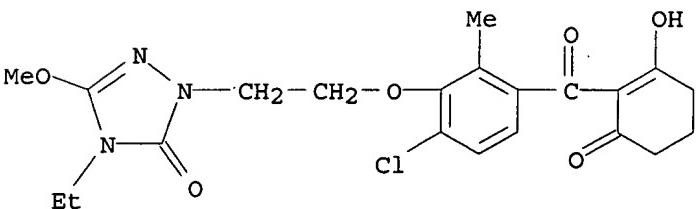
CN 2-Pyrrolidinone, 5-[[2-chloro-3-[(2-hydroxy-6-oxo-1-cyclohexen-1-yl)carbonyl]-6-(methylthio)phenoxy]methyl]-, (5S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 349479-09-0 CAPLUS

CN 3H-1,2,4-Triazol-3-one, 2-[2-[6-chloro-3-[(2-hydroxy-6-oxo-1-cyclohexen-1-yl)carbonyl]-2-methylphenoxy]ethyl]-4-ethyl-2,4-dihydro-5-methoxy- (9CI) (CA INDEX NAME)

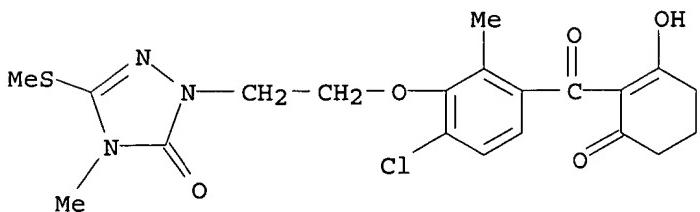


RN 349479-11-4 CAPLUS

CN 3H-1,2,4-Triazol-3-one, 2-[2-[6-chloro-3-[(2-hydroxy-6-oxo-1-cyclohexen-1-

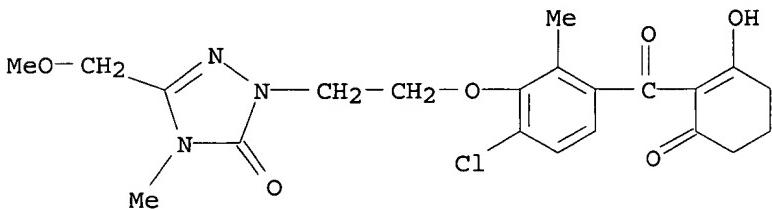
09/ 943,037

y1) carbonyl]-2-methylphenoxy]ethyl]-2,4-dihydro-4-methyl-5-(methylthio)-
(9CI) (CA INDEX NAME)



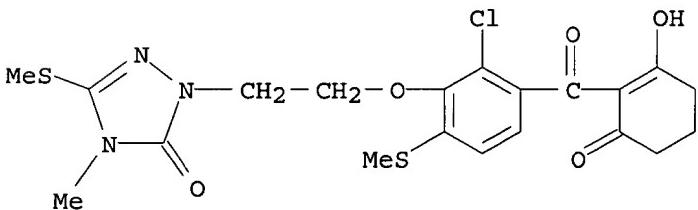
RN 349479-13-6 CAPLUS

CN 3H-1,2,4-Triazol-3-one, 2-[2-[6-chloro-3-[(2-hydroxy-6-oxo-1-cyclohexen-1-yl)carbonyl]-2-methylphenoxy]ethyl]-2,4-dihydro-5-(methoxymethyl)-4-methyl-
(9CI) (CA INDEX NAME)



RN 349479-15-8 CAPLUS

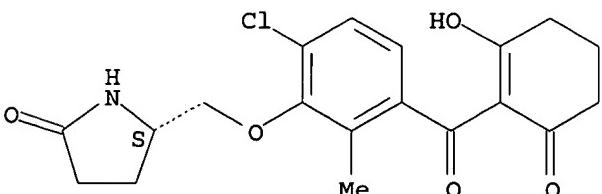
CN 3H-1,2,4-Triazol-3-one, 2-[2-[2-chloro-3-[(2-hydroxy-6-oxo-1-cyclohexen-1-yl)carbonyl]-6-(methylthio)phenoxy]ethyl]-2,4-dihydro-4-methyl-5-(methylthio)-
(9CI) (CA INDEX NAME)



RN 349479-17-0 CAPLUS

CN 2-Pyrrolidinone, 5-[[6-chloro-3-[(2-hydroxy-6-oxo-1-cyclohexen-1-yl)carbonyl]-2-methylphenoxy]methyl]-, (5S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



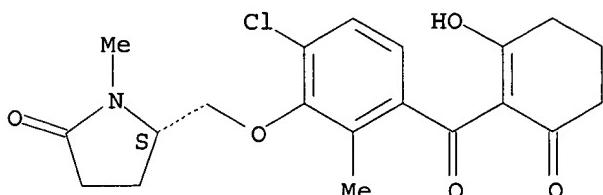
RN 349479-19-2 CAPLUS

CN 2-Pyrrolidinone, 5-[[6-chloro-3-[(2-hydroxy-6-oxo-1-cyclohexen-1-

09/ 943,037

yl)carbonyl]-2-methylphenoxy]methyl]-1-methyl-, (5S)- (9CI) (CA INDEX NAME)

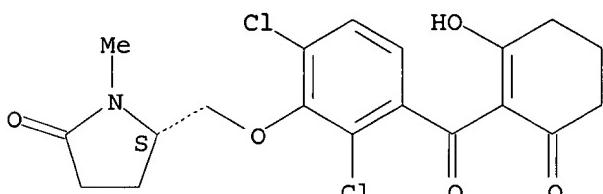
Absolute stereochemistry.



RN 349479-20-5 CAPLUS

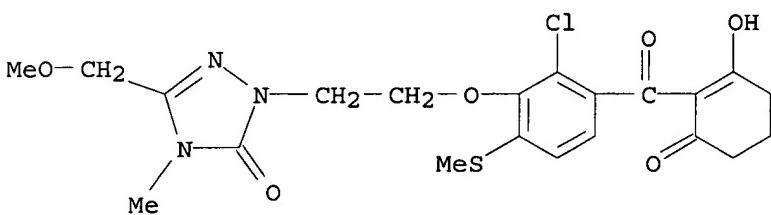
CN 2-Pyrrolidinone, 5-[(2,6-dichloro-3-[(2-hydroxy-6-oxo-1-cyclohexen-1-yl)carbonyl]phenoxy)methyl]-1-methyl-, (5S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 349479-24-9 CAPLUS

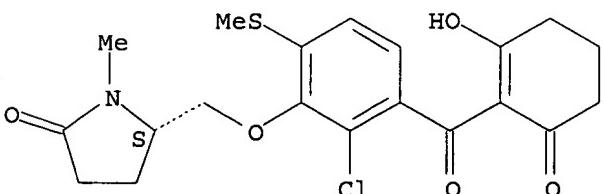
CN 3H-1,2,4-Triazol-3-one, 2-[2-[2-chloro-3-[(2-hydroxy-6-oxo-1-cyclohexen-1-yl)carbonyl]-6-(methylthio)phenoxy]ethyl]-2,4-dihydro-5-(methoxymethyl)-4-methyl- (9CI) (CA INDEX NAME)



RN 349479-26-1 CAPLUS

CN 2-Pyrrolidinone, 5-[(2-chloro-3-[(2-hydroxy-6-oxo-1-cyclohexen-1-yl)carbonyl]-6-(methylthio)phenoxy)methyl]-1-methyl-, (5S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

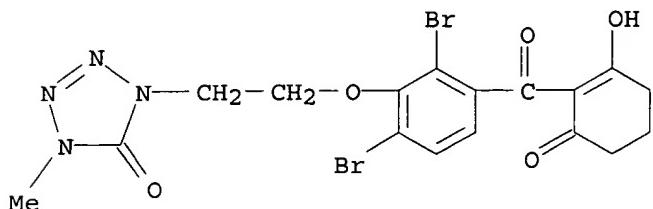


RN 349479-28-3 CAPLUS

CN 5H-Tetrazol-5-one, 1-[2-[2,6-dibromo-3-[(2-hydroxy-6-oxo-1-cyclohexen-1-

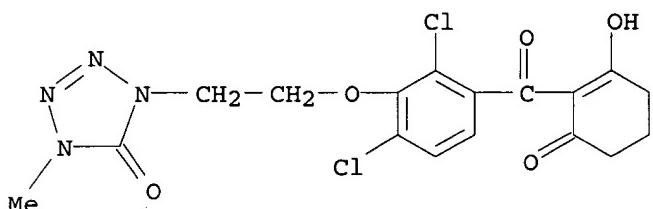
09/ 943,037

yl)carbonylphenoxy]ethyl]-1,4-dihydro-4-methyl- (9CI) (CA INDEX NAME)



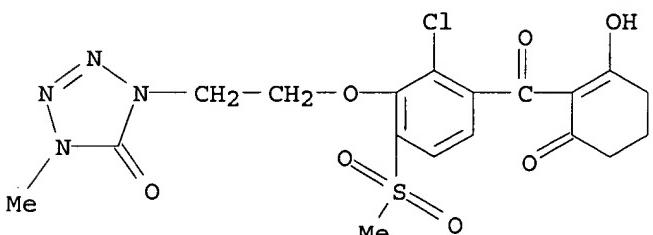
RN 349479-29-4 CAPLUS

CN 5H-Tetrazol-5-one, 1-[2-[2,6-dichloro-3-[(2-hydroxy-6-oxo-1-cyclohexen-1-yl)carbonyl]phenoxy]ethyl]-1,4-dihydro-4-methyl- (9CI) (CA INDEX NAME)



RN 349479-31-8 CAPLUS

CN 5H-Tetrazol-5-one, 1-[2-[2-chloro-3-[(2-hydroxy-6-oxo-1-cyclohexen-1-yl)carbonyl]-6-(methylsulfonyl)phenoxy]ethyl]-1,4-dihydro-4-methyl- (9CI) (CA INDEX NAME)



L3 ANSWER 7 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2001:338507 CAPLUS

DOCUMENT NUMBER: 134:340502

TITLE: Preparation of benzoylcyclohexanediones and benzoylpyrazoles as herbicides and plant growth regulators.

INVENTOR(S): Seitz, Thomas; Willms, Lothar; Auler, Thomas; Bieringer, Hermann; Thuerwaechter, Felix

PATENT ASSIGNEE(S): Aventis CropScience GmbH, Germany

SOURCE: PCT Int. Appl., 113 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.

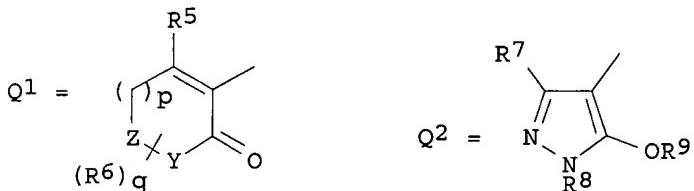
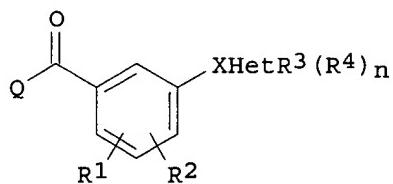
KIND DATE

APPLICATION NO. DATE

| | | | | |
|---|----|----------|--------------------|----------|
| WO 2001032636 | A1 | 20010510 | WO 2000-EP10460 | 20001024 |
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| BR 2000015338 | A | 20020723 | BR 2000-15338 | 20001024 |
| EP 1235816 | A1 | 20020904 | EP 2000-974443 | 20001024 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL | | | | |
| JP 2003513081 | T2 | 20030408 | JP 2001-534787 | 20001024 |
| US 6448201 | B1 | 20020910 | US 2000-705001 | 20001102 |
| PRIORITY APPLN. INFO.: | | | DE 1999-19953136 A | 19991104 |
| | | | WO 2000-EP10460 W | 20001024 |

OTHER SOURCE(S) : MARPAT 134:340502

GI



AB Title compds. [I; Q = Q1, Q2; X = OR3a, OCOR3a, OCONHR3a, OSO2R3a, alkyl, alkenyl, alkynyl, Ph, etc.; R1, R2 = H, SH, NO2, halo, cyano, alkyl, alkoxyalkyl, haloalkyl, alkenyl, alkynyl, etc.; R3 = H, OH, halo, SH, amino, cyano, NO2, CHO, alkoxy carbonyl, alkyl carbonyl, etc.; R3a = H, (substituted) alkyl, alkenyl, alkynyl, Ph, phenylalkyl; R4 = [C(R11)2]mAr[C(R11)2]mR12; A = O, S; R5 = OR16, alkylthio, haloalkylthio, alkenylthio, haloalkenylthio, alkynylthio, haloalkynylthio, alkylsulfinyl, haloalkylsulfinyl, etc.; R6 = H, tetrahydropyranyl, tetrahydrothiopyranyl, (substituted) alkyl, cycloalkyl, alkoxy, alkyl carbonyl, alkoxyalkyl, etc.; R7 = H, alkyl, haloalkyl; R8 = alkyl, haloalkyl, (substituted) Ph; R9 = H, alkyl, haloalkyl, alkyl carbonyl, alkoxy carbonyl, haloalkyl carbonyl, alkoxy carbonyl, alkylsulfonyl, haloalkylsulfonyl, (substituted) PhCO, PhCOCH2, PhOCO2, PhSO2, etc.; R11 = H, alkyl, halo; R12 = (substituted) cycloalkyl, cycloalkenyl, aryl, heterocyclyl, heteroaryl, etc.; Y = O, S, NH, CHR6, C(R6)2, alkylimino; Z = bond, O, S, SO, SO2, NH, alkylimino, CHR7, C(R7)2; m, n = 0-2; p = 1, 2; q = 0-4; r = 0, 1], were prepared. Thus, 2-chloro-3-(3-phenylisoxazol-5-yl)methoxy-4-methylsulfonylbenzoic acid (preparation given), cyclohexane-1,3-dione, N'-(3-dimethylaminopropyl)-N-ethylcarbodiimide hydrochloride, and dimethylaminopyridine were stirred in CH2Cl2 to give 60% enol ether, which was stirred with acetone cyanohydrin,

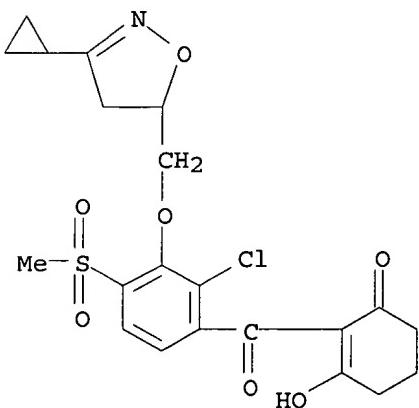
Et₃N, and KCN in MeCN to give 55% 2-[2-chloro-3-(3-phenylisoxazol-5-yl)methoxy-4-methylsulfonylbenzoyl]cyclohexan-1,3-dione. Several I at ≤1 kg/ha postemergent gave ≥80% control of Sinapis alba and Stellaria media.

IT 338461-72-6P 338461-73-7P 338461-74-8P
 338461-75-9P 338461-76-0P 338461-77-1P
 338461-80-6P 338461-81-7P 338461-82-8P
 338461-83-9P 338461-84-0P

RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses) (preparation of benzoylcyclohexanediones and benzoylpypyrazoles as herbicides and plant growth regulators)

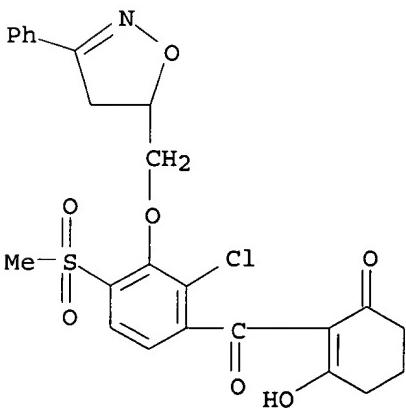
RN 338461-72-6 CAPLUS

CN 2-Cyclohexen-1-one, 2-[2-chloro-3-[(3-cyclopropyl-4,5-dihydro-5-isoxazolyl)methoxy]-4-(methylsulfonyl)benzoyl]-3-hydroxy- (9CI) (CA INDEX NAME)



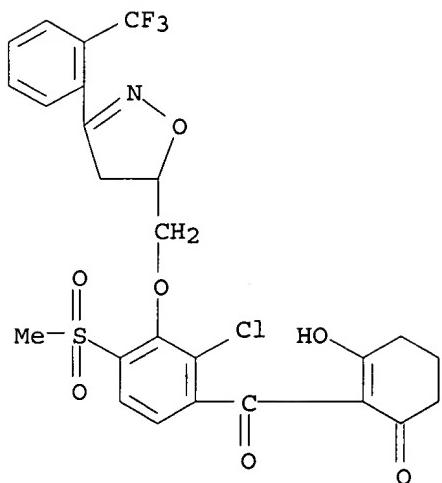
RN 338461-73-7 CAPLUS

CN 2-Cyclohexen-1-one, 2-[2-chloro-3-[(4,5-dihydro-3-phenyl-5-isoxazolyl)methoxy]-4-(methylsulfonyl)benzoyl]-3-hydroxy- (9CI) (CA INDEX NAME)



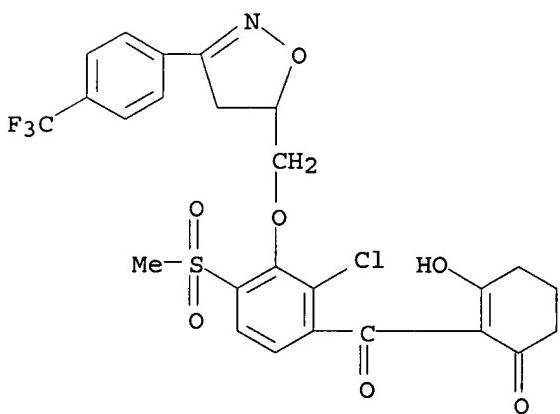
RN 338461-74-8 CAPLUS

CN 2-Cyclohexen-1-one, 2-[2-chloro-3-[[4,5-dihydro-3-[(trifluoromethyl)phenyl]-5-isoxazolyl]methoxy]-4-(methylsulfonyl)benzoyl]-3-hydroxy- (9CI) (CA INDEX NAME)



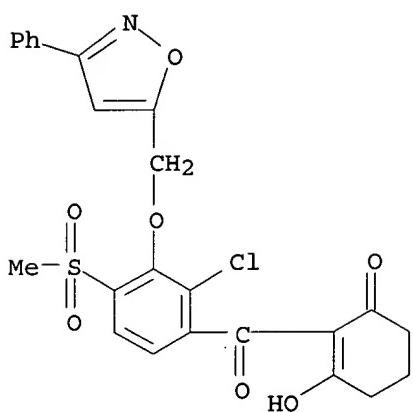
RN 338461-75-9 CAPLUS

CN 2-Cyclohexen-1-one, 2-[2-chloro-3-[[4,5-dihydro-3-[4-(trifluoromethyl)phenyl]5-isoxazolyl]methoxy]-4-(methylsulfonyl)benzoyl]-3-hydroxy- (9CI) (CA INDEX NAME)



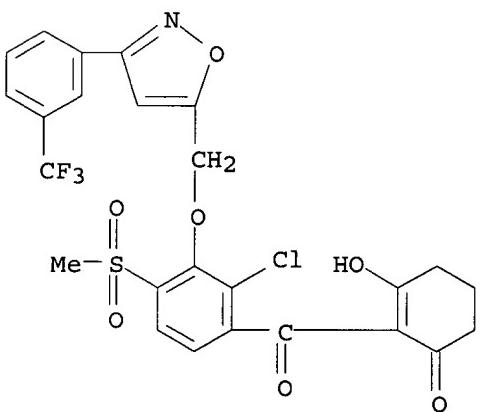
RN 338461-76-0 CAPLUS

CN 2-Cyclohexen-1-one, 2-[2-chloro-4-(methylsulfonyl)-3-[(3-phenyl-5-isoxazolyl)methoxy]benzoyl]-3-hydroxy- (9CI) (CA INDEX NAME)



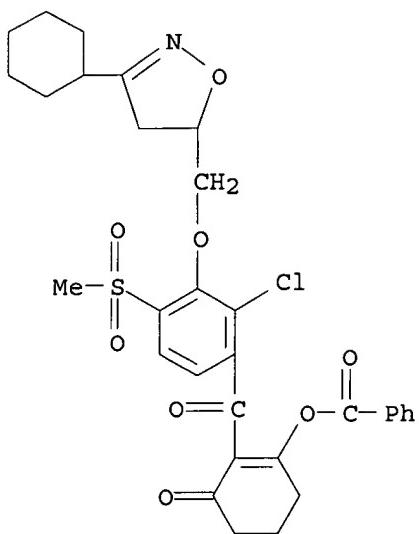
RN 338461-77-1 CAPLUS

CN 2-Cyclohexen-1-one, 2-[2-chloro-4-(methylsulfonyl)-3-[(3-[3-(trifluoromethyl)phenyl]-5-isoxazolyl)methoxy]benzoyl]-3-hydroxy- (9CI)
(CA INDEX NAME)



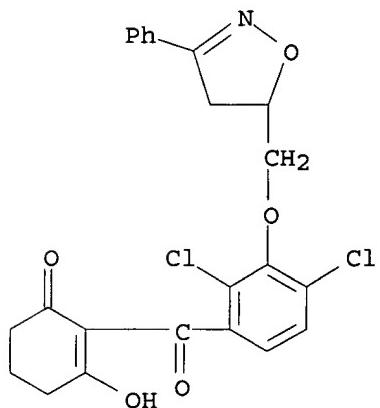
RN 338461-80-6 CAPLUS

CN 2-Cyclohexen-1-one, 3-(benzoyloxy)-2-[2-chloro-3-[(3-cyclohexyl-4,5-dihydro-5-isoxazolyl)methoxy]-4-(methylsulfonyl)benzoyl]- (9CI) (CA INDEX NAME)



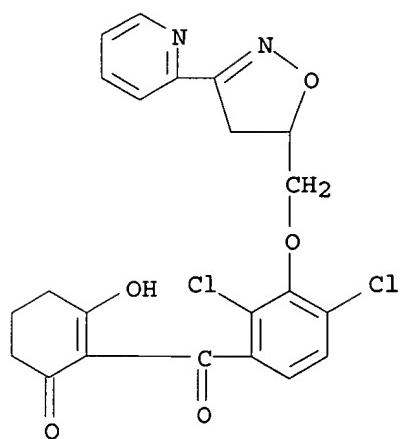
RN 338461-81-7 CAPLUS

CN 2-Cyclohexen-1-one, 2-[2,4-dichloro-3-[(4,5-dihydro-3-phenyl-5-isoxazolyl)methoxy]benzoyl]-3-hydroxy- (9CI) (CA INDEX NAME)



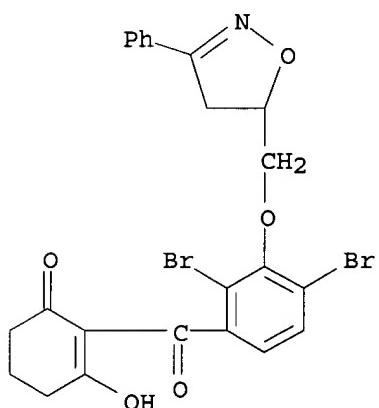
RN 338461-82-8 CAPLUS

CN 2-Cyclohexen-1-one, 2-[2,4-dichloro-3-[[4,5-dihydro-3-(2-pyridinyl)-5-isoxazolyl]methoxy]benzoyl]-3-hydroxy- (9CI) (CA INDEX NAME)



RN 338461-83-9 CAPLUS

CN 2-Cyclohexen-1-one, 2-[2,4-dibromo-3-[(4,5-dihydro-3-phenyl-5-isoxazolyl)methoxy]benzoyl]-3-hydroxy- (9CI) (CA INDEX NAME)



RN 338461-84-0 CAPLUS

CN 2-Cyclohexen-1-one, 2-[3-[(3-cyclopropyl-4,5-dihydro-5-isoxazolyl)methoxy]-4-(methylsulfonyl)-2-nitrobenzoyl]-3-hydroxy- (9CI) (CA INDEX NAME)

